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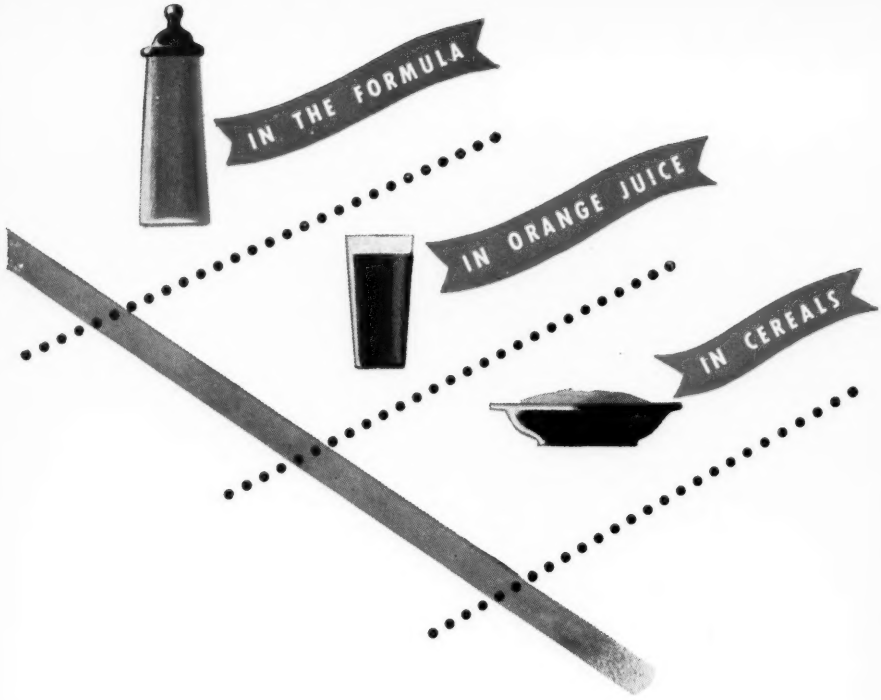

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EDITORIALS

A Preposterous Age

ASSUMING the possible enactment, some day, of a compulsory sickness insurance bill, with nowhere near enough doctors in the country to implement it—a point made clear during the recent Washington hearings — what reason is there to suppose that the freak cults will not succeed in horning into the program? During the aforesaid hearings they demanded such "service" vociferously.

It was only after great effort that the medical department of the Army succeeded in overcoming the resistance of the general staff to the protection of our armed forces against tetanus. This shows the weirdness of one of our great controlling groups. The record of federal Prohibition is sufficiently appalling. Once compulsory sickness insurance comes into being, heaven only knows what silly administrative thing might happen.

At the aforesaid hearings the freak cults asked for "safeguards to protect the rights of people to choose nonmedical practitioners and consult them for their health needs under this bill." The bill should "rally *all* the health potentialities of our country." Nonmedical practitioners "should be included in all references to practitioners of the healing art. There could be no 'choice' otherwise." "There must be the highest voluntary service designed to increase the public service of nonmedical practitioners in the fields of national health insurance, care of disabled veterans, rural health service, and a general program of cooperation with state and other health and welfare agencies."

Thus we have a fantastic foundation already laid by these pleas which may some day develop into a reality to which only a Cervantes, in a new version of Don Quixote, could do justice.

We may be at the threshold of a Preposterous Age.

Plastering a Sore

ACCORDING to the findings of a joint survey made by the Federal Reserve Board and the Bureau of Agricultural Economics, almost half of American families have incomes of less than $2,000 a year. The survey counted 1945 income before taxes and the figures represented the combined income of all members of each family.

Is there something sinister as well as merely quackish in the kind of social action that offers the palliative of socialized or nationalized medicine to meet such economic pathology instead of fundamentally constructive and remedial measures? Would not such a brand of medicine institutionalize and perpetuate the impoverished-family pathology? Would it not also be one of the means whereby the pathology at the other end of the social scale would be perpetuated—the pathology set forth in the recent United States Senate report on monopoly control by "the Big Eight"? Would not curative measures directed against this type of economic pathology be permanently stymied?

If there is an attempt on foot to make the medical profession one of the principal instruments for freezing the existing social pathology whereby economic dilution is maintained at one end of the social scale and economic concentration at the other, it should be steadfastly resisted; it would, indeed, be a more compelling reason for resistance to socialization than the reasons usually cited.

A healthy social order is a sine qua non for a healthy medicine.

Is a freezing of the status quo the real motivation of the "philanthropoids" who are so determined to plan our destiny?

The Biologic Logic of Cannibalism

THE increasing therapeutic use of human products is a notable phe-

nomenon of present-day medicine. The range includes blood, immune globulin, immune sera, and preparations of human liver, spleen, etc.

The most recent of such utilizations concerns human liver, which appears to be efficacious in the control of cutaneous epitheliomata, according to a paper presented at the San Francisco convention of the American Medical Association.

The late Madison Taylor of Philadelphia used to point out the biologic logic of cannibalism; nutritionally the human body could be better reconstituted by human than by foreign sources. *Perhaps* there is great therapeutic as well as nutritional significance in Taylor's biologic logic.

Suppose now that the key to control or prevention of internal as well as external cancer were to be found to reside in a still more intensive use—perhaps to the point of full utilization—of human products; would we not be faced by a dilemma which would be too much even for a Madison Taylor, who was a bold thinker even in going as far as we have indicated?

In a world already sufficiently confused and divested of much of its acquired veneer, we *hope* that a reversion to cannibalism holds no actual therapeutic promise with respect to cancer or anything else.

Early Diagnosis of Chest Diseases

WILSON has pointed out that despite improved methods of diagnosis 60 per cent of tuberculous patients who are referred to sanatoriums have far advanced disease, and only 10 per cent have minimal lesions. Less than 25 per cent of patients with cancer of the lung are referred for surgery before extension of the tumor has occurred.

We must have earlier recourse to fluoroscopy, photofluorography, roentgenography, branchoscopy, bacteriologic scrutiny and aspiration biopsy of lung tumors. Physical examination is essential but it is to be remembered that moderately coarse râles at an apex are present in only 27 per cent of minimal cases. Besides, tubercle bacilli are present in the sputum in 35 per cent of tuberculous patients; hemoptysis is present in 26 per cent; pleural effusion in 12 per cent; while x-ray evidence is to be found in over 99 per cent. In lung cancer, physical examination has practically no value.

Ideally, every hospital patient should be x-rayed. It is "at least four times as important as blood cell counts, urinalyses or other routine procedures now in use."

Routine smears are not much good. "Three consecutive seventy-two hour pooled sputum specimens should be concentrated. If they are negative on microscopic examination, the sediment should be cultured and inoculated into guinea pigs, and then consecutive gastric lavages examined immediately by the concentration method. Acid-fast bacilli found in gastric lavages when the sputum is negative should always be cultured and inoculated into a guinea pig to identify the acid-fast bacilli as tubercle bacilli. When these tests are repeatedly negative in a patient with a demonstrable parenchymal infiltration in the lung that is apparently active, the lesion is probably non-tuberculous, and other diagnostic procedures are indicated."

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Problem of Good Vision for Safe Driving

THE Interstate Commerce Commission recently has revised upward its visual requirements for motor truck and bus operators to the A.M.A. standards. Under the revised I.C.C. regulations all drivers of motor vehicles engaged in interstate commerce in the transportation of persons or goods must have at least 20/40 vision in one eye and 20/100 in the other eye, side vision of 45 degrees and the ability to recognize colors. The relation of vision of motor vehicle drivers to highway safety is a very important problem confronting the nation in the postwar period. Automobiles and trucks will increase greatly in numbers during the next few years, and hazards to safety will multiply. In attacking the problem of vision and highway safety, greater attention should be given to consideration of the desirability of periodic check-ups of the vision of drivers of motor vehicles.

THE COLLECTION CENTER FOR MICROBIC TYPES AT THE SCHOOL OF MEDICINE OF LAUSANNE

Paul Hauduroy

Professor of Hygiene and Bacteriology at the School of Medicine of Lausanne, Switzerland; Director of the Center

FROM the beginning of bacteriology, scientists have tried to preserve with the greatest possible care the stocks of microbes which they had discovered or were studying. On the other hand, they quite often felt the need of having in their possession for their own research cultures isolated by their colleagues in other laboratories, of comparing them with their own and of experimenting with them.

Out of this dual need were born the "Microbe Collections." They have existed for nearly fifty years, and certain of these render most remarkable services.

Museums of a new type, living museums, their usefulness is recognized by everyone. But the collection, maintenance, preservation, and distribution of microbes pose innumerable problems.

No one, I have just said, would in our time question the usefulness of Collections of Microbic Types. Examples which might be used to prove this point are innumerable. Any bacteriologist entering upon a new subject generally has a need for microbic types. Shall he isolate these himself? He could do so, of course, but isn't it simpler for him to contact a specialized laboratory which will send him the stocks which he needs? Later on, having learned how to handle these germs, he would be at liberty to preoccupy himself with their isolation.

Are not certain microbes very difficult to isolate by other means or very rare, and wouldn't their existence in a Collection simplify research? Beyond this, it is striking in perusing a treatise on bacteriology to see the considerable number of germs which have been described but which cannot be found again. Isolated once, transplanted in the course of several months or years by the one who had discovered them, they have often been lost because of some chance accident—but quite definitely lost just the same. No one any longer knows what they actually were. In other cases, the scientist who isolates a microbe which he believes to be new has neither the time nor the opportunity to study it in detail; and the hand-books are still encumbered with microbes which are not well-known, which "could be" or are not, some certain other microbe.

Wouldn't it be wise to place new germs progressively into a Collection as they are isolated? Because of this not having been done, how many precious microbes have disappeared?

The several examples which I have just cited—it would be easy to find others—demonstrate that there is no debate possible concerning the usefulness of Collections of Microbic Types.

One may find them in many countries, and they render most remarkable services. But these Collections, complete though they be, never do contain *all* known germs. They never permit a worker to know *all* the characteristics of the microbe or microbes which he needs and which he will call for.

To make myself clear—the existing Collections are never complete. They can't be, in point of fact. It is an absolute impossibility to preserve, to transplant, to maintain several samples of all visible microbes, pathogenic microbes for human beings, animals and plants, samples of *all* non-pathogenic microbes, or *all* the fermentation microbes, of *all* the culture viruses. This might perhaps be possible (and yet I doubt it) in the case of visible germs. But to maintain in a laboratory, no matter how well organized and utilized, all known viruses goes beyond the realm of possibility. To do so, wouldn't it be necessary to have stables with the most varied types of animals, aquariums, aviaries, experimental fields, hothouses?

Under the Auspices of the Swiss Academy of Medical Sciences.

Wouldn't this call for a veritable army of veterinaries, botanists, specialized technicians, assistants of all sorts?

Such an army would join the one which would already have to be organized for the maintenance of visible aerobic and anaerobic microbes for which culture requirements are so varied.

And then, if one wants these collections to be truly of service, should not each stock which is added to it be perfectly known?

Stocks of the most commonplace microbes of one particular species are never similar among themselves. Take twenty yellow staphylococci and study their characteristics in detail. One, for example, curdles milk in two hours, another in thirty-five days; one coagulates plasma in two hours, another in eight hours.

All these microbes are undeniably yellow staphylococci, but no one of these completely resembles any other. Do two brothers resemble each other to the point where one cannot tell them apart? Isn't the man in the laboratory interested in knowing these differences? The experimental results obtained with one stock which has been established are probably not comparable to those which one may obtain with a neighborhood stock. At the present time we all feel the need in bacteriology for bringing about the greatest possible precision in our knowledge. In this sense, wouldn't a minute study of the characteristics of the

Catalogue of the Collection Center for Microbic Types

Hygiene Institute at Lausanne

Stocks belonging to the Hygiene Institute at Lausanne	**162-1-1 to 162-1-15 Stocks**

STAPHYLOCOCCUS AUREUS (Rosenbach)

The stocks here described offer all the characteristics of the standard stock (red card) except individual characteristics which are listed in the table on the reverse side.

The investigation of these characteristics was made in May, 1945.

Explanation of symbols:

Gelatine:	**† Liquefaction and required time.**
Milk:	**O No coagulation.** **† Coagulation and required time.**
Plasma:	**† Coagulation and required time, as per Kourilsky method.** **(*Revue Imm.* 1942. 7. p. 51.)**
Hemolysis:	**† Weak †† medium ††† severe** **Research by means of gelose case with human blood.**
Fermentation of glycides	**Research in ordinary broth enriched with a glycide.** **O pH over 6.6** **† pH between 6.6 and 6.0 incl.** **†† pH between 6.6 and 5.0 incl.** **††† pH between 4.9 and 4.0 incl.**
Indole:	**Research by the tryptic broth method and the Ehrlich reagent. (Committee Society of American Bacteriologists. 1923. p. 31.)**

To obtain these stocks, address the Director of the Collection Center for Microbic Types, Hygiene Institute at Lausanne.

germs which we manipulate be a laudable undertaking?

THE Swiss Academy of Medical Science has considered it perfectly useless to establish a collection of microbic types similar to those which already exist, which, one cannot repeat too often, do render most remarkable services.

Quite on the contrary, the same Academy has thought it possible to create a Collection of a new sort by combining in some manner the already existing collections, by compiling, with their assistance, a catalogue containing a precise description of microbic stocks and by distributing this catalogue as widely as possible to the research workers all over the world.

I will cite some examples in order to make more understandable the organization which has been provided for.

The stocks of rabies viruses which serve in the vaccination of individuals according to the Pasteur method are derived almost entirely from the original stock of Pasteur: some of these exist in Paris, Casablanca, Tunis, Algeria, London, New York, Rome, etc. These stocks, although—let us repeat—from the same Pasteurian stock, do not possess quite *exactly,* it is understood, the same biological qualities. One is very virulent in one certain way, another is so to a lesser extent, a third one isn't at all virulent. A worker wishing to approach the problem of rabies will incontestably wish to know the particular qualities of the stock which he wants to obtain. Must he himself make inquiries of all the laboratories possessing the rabies virus? What a long and tedious job!

Thanks to the Catalogue published by the Collection Center for Microbic Types at Lausanne, he will be able to choose immediately that which he needs and to obtain it.

Another example. All the streptococci are not alike among themselves: some of them are very hemolytic, others are so only to a small degree, others again are not hemolytic at all. Some of them belong to one serological category, while others belong to a certain other one. Here again the worker

Number of the Stock	Origin and Date of Isolation	Gelatine	Milk Coagulation of the Plasma	Hemolysis 24 hrs at 37°C.	Hemolysis 5 days at 18°C.	Arabinose	Galactose	Glucose	Lactose	Levulose	Maltose	Mannite	Saccharine	Glycerin	Indole
		↑	↑												
		|	|											
		|	|											
		|	|											
		|	|											
		|	|											
162-1-1	pus 1942	|	|	+	++	0	++	++	++	++	++	+	++	0	0
162-1-2	furuncle 1942	|	|	+	++	0	++	++	++	++	++	+	++	0	0
162-1-3	furuncle 1943	|	|	++	+++	0	++	++	++	++	++	+	++	0	0
162-1-4	sycosis 1941	|	|	+	+	0	++	++	++	++	++	+	++	0	0
162-1-5	kidney abscess 1944	|	|	+	+++	0	++	++	++	++	++	+	++	+	traces
162-1-6	otitis 1944	|	|	0	+	0	++	+++	++	++	++	+	++	0	traces
162-1-7	furuncle 1941	|	|	++	++	0	++	++	++	+++	++	++	++	+	+
162-1-8	pus 1942	|	|	++	+++	0	++	++	++	++	++	++	++	+	0
162-1-9	unknown	|	|	++	++	0	++	++	++	+++	++	+	++	0	0
162-1-10	furuncle 1943	|	|	++	+++	0	++	+++	++	+++	++	++	++	0	traces
162-1-11	osteomyelitis 1944	|	|	0	++	0	++	++	++	+++	++	++	++	0	0
162-1-12	pus 1943	|	|	++	+++	0	++	++	++	+++	++	++	++	0	0
162-1-13	unknown 1941	|	|	++	+++	0	++	++	++	+++	++	++	++	0	traces
162-1-14	unknown 1941	|	|	++	+++	0	+	++	++	+++	++	+	++	0	0
162-1-15	Collection at Hérelle	↓	↓	++	+++	0	+	++	++	+++	++	+	++	0	0
		IN DAYS	IN DAYS	IN HOURS											

owning the Catalogue could instantly choose what he needs, being perfectly aware of the reason for his choice.

The large institutions which have agreed to work with the Collection Center for Microbic Types at Lausanne retain all the stocks which they currently possess, maintain them, transplant them, simply giving a complete description of them to the Center at Lausanne. The latter has this description entered into its Catalogue. Is a worker in need of a stock? In looking through the Catalogue he finds the one which to him seems to be of the greatest interest for his studies (and he finds it easily, since before his very eyes he finds the description of its essential biological characteristics). He then requests it, either from the Institute or the worker who owns it, or from the Center at Lausanne which assumes the responsibility of transmitting the request.

THE Swiss Academy of Medical Sciences believed that this new manner of envisaging the organization of a Collection of Microbic Types would be of real interest and could render great services, and this is why it was willing to accept the proposal which I submitted to it in this connection.

I will conclude by saying that this new institution seems indeed to be in that spirit which motivates the United Nations and which tends to create ever closer and friendlier relations in all fields of endeavor, and particularly in the field of scientific research.

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The Economic Cost of Paresis in the United States

THE direct cost of the taxpayer of maintaining paretics is over 11 million dollars annually and the money loss of income is approximately 112 million dollars for male paretics.

The estimated annual loss of working years of life in the United States caused by paresis is 75,729 man-years and 23,645 woman-years. Divided into occupational groups, the figures for men represent 10,655 professional and kindred workers; 11,793 salespersons; 3,768 clerical workers; 7,194 service workmen; 23,273 skilled workers or craftsmen; 6,138 semi-skilled or production workers; 10,908 unskilled or physical laborers.

The estimate of annual loss of working years nad income was based on a probable retirement age of 65. If all paretics who entered mental institutions remained there until death, the total estimated man-years from the median age to 65 would be lost. Since 1922, however, with modern therapy, it has been possible to return some paretics to their normal earning capacity: a ratio of return was calculated as 29 percent for males and 35 percent for females. The corresponding rates of loss of earning capacity are 71 percent for men and 65 percent for women.

Education and Near-Sightedness

ABOUT seven per cent of all American children entering kindergarten are near-sighted, but the defect increases rapidly from grade to grade, with surveys indicating that approximately 24 per cent of all students are near-sighted upon graduation from high school. In college visual shortcomings continue to increase, with statistics indicating that 31 per cent of the young men and women graduates from college are myopic.

Electric Welding Glare Most Harmful at Night

ULTRA-violet radiations from electric welding are more harmful to unprotected eyes at night than during the day. Although electric arcs appear brighter at night in contrast with the low general illumination, actually the intensity of the light is the same as that of arcs formed at daytime. However, in the dimmer night light the pupils of the eyes open wider, admitting large amounts of the harmful radiations from electric welding arcs. This increased size of the pupils and not the apparent increase in intensity of the light is the reason why electric welding radiations are more injurious to the eyes at night.

THE LABORATORY IN GENERAL PRACTICE

George H. Hoxie, M.D., F.A.C.P.
Berkeley, California

THE current popular discussion of the high cost of medical care may lead to a desire to decrease this cost by omitting the expensive routine laboratory work required if one is to do more than make a diagnosis by inspection, after listening to the patient's complaints. Then, too, there has been a tendency lately to limit the time given a patient to 15 minutes or less. In the long run both of these trends are bad even if in the short time view they increase our "take home pay."

The point I wish to make is that we should not rely on presenting symptoms for our diagnoses, but should regularly check the apparent diagnoses against laboratory tests.

This comes to mind from reading in surgical autobiographies statements to the effect that these surgeons were able to make decisions for or against suggested diagnoses by mere inspection. Thus far I have failed to find similar assurance in the writings of internists. Of course I must admit that many successful practitioners do not feel the need of laboratory checks in their routine work. I note, too, that such men are of aggressive personality and are usually prominent in service clubs and even in professional organizations. Nevertheless I wonder if the record would credit them with an accuracy much greater than 50-50. Of course the temptation to exhibit our brilliance to the laity is strong. And caution is frequently confounded in the lay mind with weakness or ignorance.

Two cases come in mind to illustrate the lack of sequence between presenting symptoms and pathology. One must be merely glossed over. The other can be given in greater detail.

CASE 1: A middle-aged woman of high social position complained of headaches, general aches, weakness, etc.—conditions bound up with the word neurasthenia —nothing definite enough for the doctor to make a diagnosis of organic disease. She was sent the rounds of clinics and sanatoria without benefit. When she died—not under my care—the pathologist reported a typical pernicious anemia.

At that time Minot and Murphy had not yet worked out the pathogenesis of macrocytic anemia. However, had laboratory work been done to point out the deficiencies, some help might has been given her.

CASE 2: A tall, thin woman with calm, sadly smiling face—with a resigned air. She had been born in England. Her husband was a helpless cripple from arthritis. These two people lived with their daughter and her husband in a pleasant cottage on a good street. Everybody worked but the arthritic. Everybody seemed kind and gentle. If there was anything outstanding about the patient it was her air of patient resignation. She went daily by public transportation downtown to the manufacturing stationer's where she worked.

She was seen first February 28, 1925. She said she was 61 years old, and her occupation was reading cards. She complained of stomach trouble—gas and nausea—which had persisted for 3 or 4 days and for which she had used magnesium citrate.

I found her temperature 99; pulse 80; blood pressure 140/90; weight 102 (best weight 125). She had been hoarse for one or two years. Her teeth had been pulled on account of caries. Except for injected fauces and emaciation the examiniation was negative. She had had a similar attack the year before when she was home for 6 weeks; and also in former years without definite memory as to dates. But she had never been "really sick."

The blood showed a hemoglobin of 90%; red cells 4,200,000; white cells 6,200; the total granular cells 73%, of

which 2% were eosinophiles, and 1 mast cell.

There was crepitation above the navel, with succussion above the pubis. The stomach contents—3 hours after milk—amounted to 150 cc. with a 2-layer consistency, no odor, green with bile, a total acidity of 65, and 45 free hydrochloric acid.

The urine showed phosphates but no albumin, no sugar but plenty of indican.

Under the influence of diet and abdominal support she was able to go back to work and on March 23 weighed 105½. The temperature was still 99; the pulse 74; blood pressure 132/80. By April 25 she weighed 109½.

January 1926 she had sore throat, cough, no sputum. Acute tonsillitis. The temperature was 99.2; pulse 88.

In January 1928 she complained again of gas in the pit of her stomach, belching after soda. Her weight had dropped to 99. The stomach was dilated and prolapsed.

The stomach contents were normal.

The urine again showed phosphates, but no albumin, with heavy indican.

She was seen again February 14, 1928, with a temperature of 99.4; pulse 76. The stomach was dilated and lying below the navel; the right kidney was prolapsed. This illness cleared up promptly with carminatives.

But on February 24, she had epigastric pain and flatulence. The breath was acetone in type. But there was no tenderness and no fever.

An interesting telephone message on March 12, 1928 said the fingers were peeling, and she wanted cold food, but was eating well.

She was seen again, incidentally, September 16, 1930 with a temperature of 98.6; pulse 96; weight 115; blood pressure 180 to 175, systolic; and 100 to 95 diastolic.

On December 8, 1930, the stomach had been bad for 2 weeks ("misery and sickness"), centering just above the navel, relieved by eating. The bowels were emptied by soapsuds enemas. There was a backache across the hips. She was treated for gastric ulcer, with a protein diet, atropine powders, and so on. She did fairly well; but on January 2, 1931 there was a complaint of nausea, but no tenderness or pain. The pillars of the throat were red, but there was no fever.

On January 20, 1931 the pulse was 100; the systolic blood pressure varied from 140 to 150, the diastolic at 100. There was tenderness in the left epigastrium. The tongue was clean. The pulsations of the aorta were so great as to be felt in the left upper quadrant, but not at the navel, causing the suspicion of aortic aneurysm.

She was next seen August 7, 1932 complaining of nausea. A pulsating mass to the right of the navel, and transmitted above it, aroused my suspicions. She was seen by Dr. Valentine who felt that there was no malignancy there.

At 2:15 P.M. August 8, 1932 the temperature was 100.2; pulse 104; blood pressure 175/85. There was the pulsating abdominal aorta and visceroptosis; no palpable liver.

The hemoglobin (Tallqvist) was 72%; red cells 3,970,000; white cells 8,700; polymorphonuclears (ripe) 59%, immature 6%, large mononuclears 3%, lymphocytes 32%. The red cells were not enlarged.

The urine had an acidity of 180; specific gravity 1020; 5 milligrams of albumin; no sugar; a slight trace of indican; the stomach contents had a total acidity of 46, with free hydrochloric acid of 40.

On August 11 the temperature was 99; pulse 100; blood pressure 140/90. She was treated again by the milk diet, also bismuth powder, but did not do well.

When I saw her again on August 16, she complained of pain in the epigastrium and nausea. Everything seemed to be in order. She was given on the 19th a dose of synodal (a proprietary combination of emetine and lipoproteins for use in peptic ulcer) but it produced a bad reaction—gasping, nausea, rapid pulse, sweating, and clonic spasms. This lasted for 30 minutes.

I saw her again on August 28th when she complained only of weakness and nausea. I could find only the forceful pulsation of the aorta. The tongue was moist and clean. There was no fever; the pulse was good. But she would not take any food and the family reported that she had had occasional bad spells when she retched but could not vomit anything. The family could not get her to eat. She showed distress after

everything except milk.

September 6, in the evening, she had sudden pain in the epigastrium, which looked to me like a case of pylorospasm, and was relieved with 1/100 of atropine.

On September 8th she developed hives, or blisters, appearing as red blotches all over the body. I did not see these; they were reported over the telephone.

I saw her again September 15, 1932, complaining of nausea and weakness. She could not help herself. She had not, of course, been eating. The bowels had been emptied by enemas. The eyes were sticky. The pulse, however, was good. The abdomen was flabby, but retracted. The tongue was dry. The blood pressure was 120/90.

The next day her daughter reported that her mind was wandering; that she had lost the use of her hands and the ability to do things readily. There was seepage from the rectum which developed into involuntary stools, followed by involuntary urination.

On September 28, the blood pressure was 140/100 but still the urination and bowel movements were involuntary. She lay curled up in the bed with eyes closed, respiration regular, the pulse good. She would hardly respond to what was said, yet seemed to show that she understood what was said to her.

On the 29th and 30th evidence of bleeding by rectum appeared. On October 2nd, the daughter reported that the discharge seemed to appear from the vagina, that the mother showed distress. I found the pulse at the wrist feeble. She slept away and died on October 3, 1932, at 7 A.M.

THE pathological report read:

Anatomical Diagnosis: Extreme emaciation and starvation; atrophy of all the parenchymatous organs with bright yellow pigmentation of the subcutaneous fat and deep brown pigmentation of the liver; atrophy of the pancreas and spleen; fat replacement of the pelves of the kidneys; hyperplastic hemorrhagic retroperitoneal lymphadenitis; atheromatous cyst of the left ovary; fibroid seedlings of the uterine myometrium; extensive submucous hemorrhages and ecchymoses of the rectum and sigmoid; duodenal ulcer (chronic); chronic adhesive pleurisy with healed pulmonary tuberculosis; hyperplasia of the marrow of the long bones (patchy in character); adenomatous hypertrophy of the thyroid gland; degeneration of the cord; anthracotic pigmentation of the liver and spleen.

Gross Inspection: The body is that of an emaciated white female sixty-nine years of age. On external inspection, she is remarkably emaciated and shows a dry, pale, grayish white, anemic appearing skin. Otherwise, external inspection is negative except for the extreme degree of emaciation.

Section: Incision was made from the midmanubrium to the symphysis pubis and the upper end carried out toward either shoulder. Upon opening through the belly wall there is a very scanty amount of abdominal fat present and that which is present is of a very yellow color. On opening into the peritoneal cavity, all the organs show considerable starvation atrophy. The liver is deeply pigmented and of a chestnut brown color. The spleen is also small and shows some chronic perisplenitis. The pancreas is atrophied. The stomach is slightly dilated and in the duodenum about 1.5 cm. from the pyloric sphincter there is a small round punched out chronic ulcer about the size of a dime. The remainder of the G-I tract shows nothing until the terminal ileum is approached where a considerable number of submucous hemorrhages are present and these become more numerous as the large bowel is entered and in the ampulla of the rectum and in the sigmoid they are very numerous and of black charcter. The bowel content is mostly fluid with a few hard fecal masses. The peritoneal surfaces are dry but otherwise smooth and glistening. The retroperitoneal lymph nodes show considerable hyperemia. The kidneys show replacement fat in the pelves. The capsules are thin, strip readily, and show a relatively smooth cortex. The adrenal glands are markedly atrophic and show a thin zone throughout the cortex of yellow color. The ureters are negative. The bladder shows nothing. There is one small atheromatous cyst of the left ovary and the uterus shows some small fibroid seedlings

under the serosa which are hard and sclerotic in character.

On opening into the chest, both pulmonary apices are adherent and some healed tuberculosis is found; there is one healed calcified tubercle in the subpleural lymphatics on the left lower lobe of the lung on the lateral border. There is a slight amount of mucous bronchitis. There is no evidence of pneumonia present. The pericarial sac is smooth, moist and glistening. The heart hangs freely within. There is considerable increase in subepicardial fat of a bright yellow color. The heart is quite small; in fact, it is very much smaller than normal for a woman of this size. The chambers are all clean. There are a few small scars in the left ventricle and some shortening of the chordae tendineae. Brown atrophy is present throughout the myocardium. The coronary vessels show a few patches of sclerosis.

The red bone marrow of the ribs is relatively scanty. In the spinal column it appears fairly normal, and in the femur the fat has been replaced in patchy areas by red marrow although it is by no means typical of pernicious anemia. The blood itself does not look particularly watery. The spinal cord shows some areas of what may be degeneration of the lateral and posterior columns; although it is difficult to evaluate from the gross specimen.

The gallbladder and bile passages are patent.

The thyroid gland shows one degenerating adenoma of the lower pole of the left lobe. The gland is somewhat more meaty in character than normal. The trachea shows nothing. The tongue is excoriated and very dry.

Histological Pathology: Section through the heart shows some obliterating endarteritis taking place in the finer coronary ramifications, with here and there patchy areas of myocarial fibrosis.

The thyroid gland shows cuboid lining of the epithelial cells with some peripheral vacuolization. Many large follicles are seen and evidence of a low grade toxicity is present but not marked. It gives the impression of being a colloid goiter, with low grade epithelial activity. The parathyroid shows some dilated acinar structures filled with pink staining colloid material. For the most part, however, nothing but parathyroid tissue of fairly normal character is seen.

The lung shows some anthracosis and thickening of the blood vessels. Otherwise there is nothing of particular moment.

The liver shows considerable pigmentation of the cells around the central vein. Some of this pigment is almost black. Another interesting finding is the presence of deposits of black pigment around some of the blood vessels and around the central vein. Occasional areas of periportal fatty change are also seen. Some small bile ducts plugged with bile thrombi are also encountered. Therefore, three different kinds of pigment are present: the black pigment, a greenish bile pigment, and definite blood pigment.

The spleen is small and atrophic and around the malpighian bodies this same black pigment is seen that was found in the liver. The nature of this pigmentation is difficult to interpret. The deposition is chiefly intracellular.

The adrenal glands show some small foci of round cells and a patchy increase in the lipoid content of the cortex. In the medullary portion, considerable hyperemia is present.

The duodenal ulcer is lined with old chronic granulation tissue and is partially re-epithelized. The base is made up of dense fibrous tissue. Obliterated blood vessels are found in the base. Brunner's glands are found in abundance at the periphery of the ulcer. A low grade chronic inflammatory reaction is present.

The kidney shows a low grade tubular change. Foci of round cells are present under the capsule in the cortex and there is considerable thickening of the medium sized blood vessels. The aorta shows a typical atherosclerosis of the thickened intima with some beginning deposition of calcium salts.

The spinal cord shows many corpora amylacea scattered throughout the white of the cord. In the white matter, some degenerative changes are taking place in the myelin sheaths.

Section through the bone marrow shows active hematopoiesis in the femur, and the formation of both white and red cells.

COMMENT—The presence of pigmentation in the liver and spleen, as well as an active hematopoietic proliferation in the marrow of the long bone, and the additional factor that there are extensive degenerative changes taking place in the cord seem sufficient to hazard a diagnosis of pernicious anemia.

SO much for the pathological report. Now for a short discussion:

The misery in these two lives certainly was enough to cause "frustration" and the psychosomatic ills incident thereto. But the materialist wonders whether there would have been a different story if the "intrinsic factor" had been provided. But the point is that in both cases the solution of the problem rested on laboratory—and that includes x-ray—services.

Such experiences bring up the topic so much under discussion these days of the availability of laboratory service in general practice. All grant the need, but few see a practicable method of securing it—unless we all become specialists. But there are four ways of getting it: (1) If one has only a few patients one can do most of the work oneself; (2) If one has a large practice one can hire technicians and make the cost less than if one sends the work to independent commercial laboratories; (3) One can send all work to independent laboratories; or (4) One can "affiliate" with a hospital and get the hospital laboratory to do the work.

The ideal is the last. Some younger men have been able to "sponge" on the hospital and get their work done in that way. The greater number simply ask the patients to pay for the laboratory service at the hospital. But it would be simpler and better for the good name of medical practice if our hospitals would frankly let the doctors have offices in adjoining buildings and make the effect that of group practice, without the rigid control now imposed on such associations.

I speak of this matter because the cost of laboratory service has been an important factor in bringing about the present demand for "socialized" medicine. That is, the individual doctor can regulate the charges for his personal services, but he cannot regulate the charges of his consultants. And the bills for drugs and laboratory services have been the last straws to overwhelm the unfortunate patient.

The problem of the "closed" hospital staff has become the subject of vociferous complaint on the part of the doctors left out and of the public who cannot get beds. Of course one answer is more hospital beds —by government aid if need be. Another answer is that advocated by Davis, viz., groups and clinics built up around central hospitals. Still another is compulsory health insurance which would create a fund to build hospitals and canalize the traffic.

At present the hospitals depend on the laboratory fees for considerable revenue. Since this revenue is obtained from people who are suffering from "catastrophic" illness and expense, the procedure has aroused bitterness which has vented itself on the doctors, rather than on the system of paying the doctors. For that reason the hospitals would be better off if their laboratories were open to the public—that is, if their clientele were larger, and if their laboratory workers were on salary. But until that day comes the doctor without a laboratory is handicapped; and will have to call in more consultants than his patients can pay for, unless he is willing to run the risk of making the mistakes which we who had none of the present day laboratory service used to make.

2600 RIDGE ROAD

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Cost of Eye Accidents

COMPENSATION paid for eye accidents in New York State amount to twice the average payment for all other disabling industrial accidents.

Defects of Vision of Children

ABOUT one out of every 500 children of school age in the United States is either blind or suffering from very serious impairment of sight.

DEVICES IN MANAGEMENT AND TREATMENT OF ESSENTIAL HYPERTENSION

J. Edward Johnson, M. D.

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IS essential hypertension a disease or a neurosis? Or is it merely a symptom? Does it begin insidiously and progress by stages to a final, fatal end? Or is its course frequently unpredictable? And if—and when—it does begin insidiously, at what stage and by means of what criteria may it be positively diagnosed? And finally does treatment modify the course, and—if so—what treatment?

Qualified investigators may be found who will champion each of the above suggested viewpoints and there is no general agreement as yet as to the final answers to the questions. During the unsettled state of our knowledge there is much confusion in the minds of practitioners, and their advice and treatments offered to patients vary widely and at times ludicrously.

For example, we frequently see a patient who tells us his former examiner told him he has hypertension. We take his pressure and note that although there may be an initial reading above normal, the tendency even at that first sitting is for it gradually to subside to approximately normal. Now the question arises: is this patient in an early stage of hypertension, and, if so, can he be expected to move gradually in course of time to the chronic and permanent state of malignant hypertensive disease? But even if we feel that this may simply be a reaction to a neurosis, can we modify the otherwise progressive course by treatment.

Evidently the profession believes treatment is effective if we may judge from the efforts made by doctors in that direction. One patient is told he must have his unerupted molars surgically extracted to remove the "nerve tension" they produce. Another must change his occupation from banking to ranching, or from farming to bookkeeping, or risk early cerebral hemorrhage. Others are advised to "quit worrying;" to quit having blood pressure readings made; to restrict their diets, eliminating meats and heavy foods; and some are urged to make occasional donor contributions to the blood bank.

REGARDLESS as to which view we favor as to etiology, and whether we think the disorder can be modified much in its course in our present ignorance of basic facts underlying it, there still can be no legitimate scientific doubt that emotions may affect blood pressure readings. Fear, anger, pain, and the anxieties produced by them are definitely implicated in certain patients. Many doctors realize these facts and are making good use of the knowledge in clever schedules designed to allay or to give normal, socially acceptable outlets to these emotions. However, many others are completely at sea on the problem and either do nothing about it, or actually succeed only in creating meddlesome factors of influence that further increase the intensity of the disorder. An example of this was recently noted in a patient who was told that she should never ask what her blood pressure reading was. This merely confirmed her fear that her condition was critical and that she had only a short time to live. Each visit to the doctor was like the passing of another birthday to an octogenarian. On taking over from her physician I set into action the plan described below which is the subject of this article and the best means I have found for management of the mental anxieties of the hypertensive patient regarding his blood pressure readings and their significance.

In the beginning I explained that one reading of blood pressure was of very little importance and that no diagnosis based on occasional readings would stand up. The

initial systolic pressure was 196; diastolic 110. With cuff still in place, I adjusted her chair and encouraged her to take a comfortable, relaxed position leaning against the back. The second reading—as is often noted—fell some ten or fifteen points. Also, as often observed, it was discovered that readings fluctuated within a few minutes over a twenty to thirty point range. This may be accepted as an indication of an unstable neurovascular mechanism that is potentially liable to be dominated by emotional factors.

The problem in the nervous hypertensive is how to get the final reading that will represent the pressure he would have at the time if all disturbing psychic (emotional) factors could suddenly be turned off like a hydrant. Formerly—that is, some years earlier in my practice—I used to take considerable time to eliminate this interference. Later, I learned devices that would shorten the time. Still later the idea occurred to me that these devices could themselves be turned into therapeutic service after they had served initially as screens to filter out the disturbing influences. Referring again to the case under discussion, I will explain the use of one of the devices that proved effective for her.

As indicated above, she had come with a previous diagnosis of essential hypertension and had proved to have the type of nervous instability that permits easy fluctuation of pressure from rather high to relatively normal values. After establishing the above facts in the manner described, the next step was as follows: pressure cuff inflated, pressure read at about 190 systolic: patient indicating some mental anxiety. Instructed her to lean back, relax, and breathe normally. Then after two or three readings in rapid succession, allowing cuff to deflate after each one, patient was told to take a deep breath and hold it. As she did this the cuff was rapidly inflated. Then she was told to take a deep breath, hold it a moment and let it go. Then to inhale, hold a moment, exhale to limit and hold with all air expelled from chest. As she was doing this I was reading, deflating, re-reading, etc. After the first or second effort made at the breathing exercise, pressure dropped to about 150 systolic where it remained during several readings. Diastolic usually accompanies systolic in descent although to less degree, but often returns to normal or near normal, in the neurovascular-unstable subject.

Now to make therapeutic use of the device, I leave the deflated cuff on the arm and turn the patient or instrument so she can see the readings. First explain the two pressures, and the means of reading them —if not already understood. Next show her what her pressure was, by inflating to that level. Then deflate to level it now occupies. Show her how it fell as she deflected the nervous influences through actively occupying the vagus nerve in the respiratory efforts, and explain that although her pressure may have been read on various occasions at the level first noted by me, it is likely that nervous interference of a purely emotional or psychic nature may have deceived the examiner as to the true level that should have been recorded.

THUS, the patient, by finding out some of the true facts about his condition, is immediately relieved of one factor in the perpetuation of his abnormal pressure. If, on another occasion, the same high reading is encountered, it is usually possible, and this time desirable, to let him watch the breathing exercises remove the nervous interference, as the systolic falls lower and lower and finally reaches a stable point at a much safer level than previous tests had shown.

It is helpful to explain that blood pressure is supposed to be adjusted automatically to the body needs at the moment and that it is nothing uncommon for pressures to range in healthy and active people from thirty to fifty points during the day as need for change arises. One nervous woman was immeasureably relieved when she learned that when she was in an emotional crisis she needed higher pressure and that if nature was not wise enough to supply it she probably would be calling the doctor for fainting fits instead of anxiety about blood pressure.

Some cases are not so easily solved. Occasionally one will require examination on

several separate days before the examiner can devise a clever method to defeat the neurotic trend that elevates the blood pressure each time the cuff is inflated. For these the following additional devices may be of service.

The Exercise Test:

AFTER recording the results of the first test, ask the patient to take some kind of physical exercise that will cause definite rise in pulse and respiratory rate. Stair climbing, hopping, "push-ups," or rapid squatting to heels and rising may be used. Usually readings directly after strenuous exercise will show elevation, but within two to four minutes lower levels are reached and at this time the breathing exercises detailed above may block the nervous influence and show normal readings. If this does not work then try THE JACK-

Knife Test:

THE patient lies down on a bed or table. Strap the feet firmly but comfortably so he can rise quickly to a sitting position without kicking up his heels. After reading his pressure in the prone position then ask him to rise quickly to a sitting position. Read the pressure quickly after he attains each position. Have him make several changes of position, reading the pressure in each and recording it. If there is no substantial fall in pressure with any of these devices, the individual should be classified as probably an organic case and unsuited to this type of therapy.

Now it is very important for the examiner to understand exactly what he is trying to do with these tests; otherwise nothing will come of his effort to carry them out. The objectives may be stated as follows:

1. Selection of the neurogenic hypertensives from the organic.
2. Preparation of the selected patients for psychotherapy.
3. Establishment of the patients on psychotherapy.

THERE is considerable and growing weight of opinion at the present time that essential hypertension is a complication of the anxiety state that produces it. At any rate, the cases selected by the above devices will usually be found to respond quite well to the fact that they can actually reduce their own blood pressure. It is also a relief for them to know that they had been running their pressure up as the examiner tried to read it, so that he had not been able to record the actual and usual level but had been deceived by the examination-stimulated effect their anxiety had produced.

It is easy to convince such a patient that he DOES have a supersensitive nervous reflex that is dominated by his psychic reactions, and that, for this reason—if for no other—it is important for him to learn something about his own adjustments to environment. He is then usually willing to cooperate in psychiatric study for the purpose of controlling the anxiety.

Used in this manner, we are able to select the patients who can benefit from psychosomatic study and to condition them for the psychotherapy, which alone can rescue them from the fate of the malignant phase of this dread disorder.

A few points are useful in selecting cases for trial. Organic cases—that is, those with hardening and thickening of vessel walls—are usually older people, fifty or above. Their hearts are enlarged, they have some kidney involvement, their eyegrounds are abnormal, and they DO NOT show the fluctuation in systolic readings noted above. Also their diastolic pressures are above 110 and do not fall in successive readings. A characteristic of blood pressure from kidney damage, or in which renal impairment is a factor, is its fixed level in successive readings. The patient reporting a previous diagnosis of hypertension who does not show any of the above changes and WHOSE HEART is not enlarged is very suitable for this method. We can tell him that his hypertension is either of very recent origin, or—as we can suspect—it is not ACTUALLY elevated much of the time in any twenty-four hours. It is convincing to use the illustration of the well known enlargement of the arm of the blacksmith from swinging the sledge or the leg of the boy riding bicycle races.

—Concluded on page 260

REPORT OF PERIPHERAL NERVE CRUSHING FOR PAIN IN VASCULAR DISEASE

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IN peripheral vascular disease there is pain. This pain can be very severe and disabling. Walking is limited and sleep is disturbed by the pain.

In the conservative treatment of peripheral vascular disease crushing of the nerves to the foot is indicated at times. The crushing of the motor nerves and section of the sensory nerves (1) relieves the pain, (2) improves the circulation by removing the effects of the vasoconstrictor nerves, and (3) allows dressing of painful ulcers in an anesthetic area.

The motor nerves, when crushed for ¼ inch, will regenerate in about 6 months.

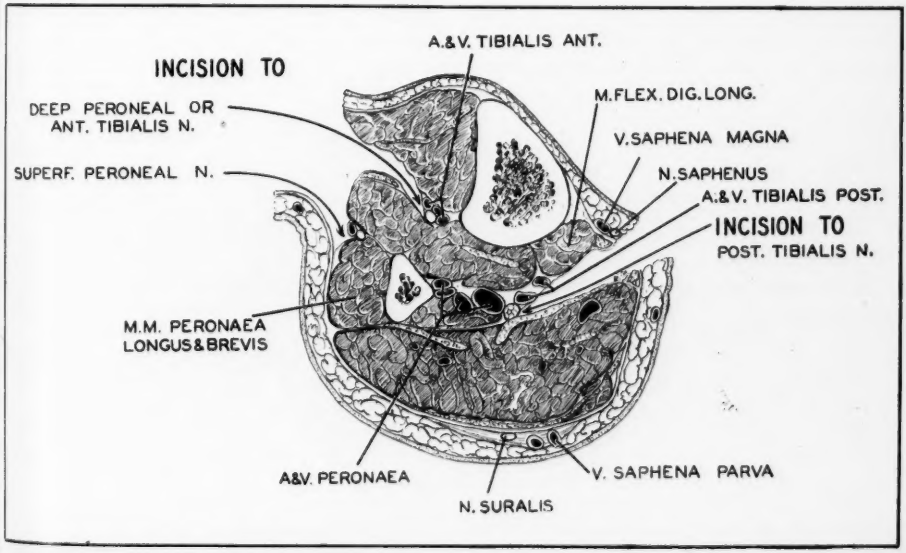
Read at the Annual Meeting of the Associated Physicians of Long Island, Meadowbrook Hospital, Hempstead, N. Y., on June 11th, 1946.

We have done this procedure a number of times but have only one case of a 3-year end result. All the other patients have since died.

We wish to show the case of P. W., aged 70, on whom we did this procedure in 1942. He has had no pain since a second operation. The first was done by the author and the crural nerve was not found. Dr. W. P. Bartels later reoperated and sectioned this nerve.

This patient has a very marked arteriosclerotic peripheral vascular disease. All the clinical findings one desires are present.

This procedure is useful in selected cases of peripheral vascular disease when the popliteal pulse is present.



SEARCH AND RESEARCH

PATHOLOGICAL RELATIONSHIP OF INSPISSATED BLOOD TO FIBROUS TISSUE FORMATION

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THE important role which fibroblastic growth plays in the process of the repair of tissue injury and also in the formation of fibromatous tumors has not been appreciated fully by some surgeons and pathologists. It is, indeed, a difficult question to ascertain just where cell proliferation of reparative processes ends and where tumor formation begins. The scar of a surgical wound is the result of tissue repair, yet it can and does, in some cases, continue to grow so that a hypertrophic scar or a keloid may be the end result (1).

The repair of injured tissue follows a set pattern in most bodily areas. Yet clinicians have, for some reason or other, exhibited a tendency to classify the end results rather than use the underlying pathological processes as the yardstick for comparison.

In the past fibrous tumor formation has been thought of as being the result of some mystic force which has played havoc with the normal cell functions. Furthermore, many researchers have had the idea of attacking the most complex problem of the why and wherefore of cancer formation by beginning the work at the top of the ladder. In my humble opinion, it would seem that the logical approach to the study of complex problems, as cancer growth, for instance, should be attacked by attempting to learn something as to the *modus operandi* of benign tumors. Yet, very few if any articles have come from the mighty laboratories and foundations on this important subject. It appears that we must attempt flying before we have made the plane available.

During the past several months, the author has taken every opportunity to discuss the reason why so many pathologists consider the common "fibroid" of the uterus as a tumor of smooth muscle. Some of these men will tell that there is a definite proliferation of the muscular elements in the sections which they examine. But is this exactly so? The information, gleaned from textbooks on pathology, is agreed on the presence of fibrous tissue. More fibrous tissue, which happens to be deposited, pushes finally through the muscle strands and displaces this muscular element. Is this fibrous infiltration really the cause of a proliferation of the smooth muscle of these uterine tumors? The author believes so. I have examined many sections of these so-called "fibroids," and I have found that the invading fibrous element tends to become dominant, especially in older and larger leiomyomata. Hence, I cannot agree with those pathologists who claim that this muscle element is the prime growth factor in these neoplasms.

I repeat: many pathologists and surgeons have not grasped the significance of fibrous growth in the reparative processes and the relationship of this healing event to the ultimate formation of the fibrous type of tumor.

The purpose of this paper will be an attempt to bring some similar mechanisms of fibromatous changes in tissue to the attention of the reader with the hope that this review will assist him to obtain a more integrated view on these matters.

THE author (2) showed that blood serum, when injected intradermally in repeated small amounts (to resemble hemorrhage through diapedesis), produced growths in the human which have a striking resemblance to keloids. From this elemental research, he concluded that in-

spissated blood serum (or blood, as a matter of fact) has the ability to attract fibroblasts to the area of injury. These proliferate to such an extent that they produce a "piling-up" and the resultant keloid. This ability of inspissated blood to attract fibroblasts is thought to be produced through a chemotrophic response. This is not a prank of nature, for the author does not believe that such tumors were caused by embryonic rests nor from any displaced cells. In other words, the new growth, or as some pathologists prefer to term the resulting mass of fibrous tissue, the "pseudoneoplasm," was the end result of a most orderly process. It was the body's reaction to injury, and eerie spirits and haunted cells had nothing to do with its result.

We have some cause to believe that inspissated blood, imprisoned in the tissue stroma of the uterus, whose myometrium has been disturbed because of infection, might also be at least one of the main causes of uterine "fibroids." We hope to either prove or disprove experimentally our present views on the matter.

The role of the fibroblasts, in tissue repair, is of a huge order. Dermal or similar tissue defects are repaired and are replaced by fibrous tissue. It is an axiom in histology that the more specialized a tissue cell happens to be, all the more difficult it is to repair itself by the same type of tissue cell. If the cell has become highly specialized, as exemplified by a liver cell, such an element is replaced by scar (fibrous tissue) as the end result of the reparative process. Smooth muscle cells of the "fibroid" are different, if we are to believe some pathologists, but such a statement does not hold too much logic in the opinion of the writer.

TO return to the subject of wound repair, the granulation tissue is composed of numerous small granules of fibrous tissue of about one millimeter in diameter. Moore (3) has stated that "each granule is composed of a central vascular core with proliferating fibroblasts and wandering cells in the intervascular spaces." Moore has described beautifully the reparative process of a skin wound in the following manner: "In a large wound of the skin, extending into the deeper structures, repair involves filling the defect and reestablishment of epithelial continuity. The defect is filled by granulation which gradually grows up from the base. Until this granulation tissue reaches the surface there is little reaction on the part of the epithelium. As the epithelium starts to proliferate, a delicate bluish, translucent zone about the edge with a sharp, irregular inner margin can be seen. The fiibroblasts serving as adventitia for the sprouting capillaries deposit collagen, and a scar finally results. With maturation of the scar the rich vascular network of granulation tissue gradually disappears, the collagen contracts, and the dense, firm, relatively avascular scar is the result."

We see, then, that the fibroblast is the main unit of repair in many cases of injury or infection in the body. It is associated with the capillary systems which send in their early "lines of communication," as it were.

This same phenomenon appears to exist in the case of *hematomas,* which are caused by hemorrhage into the interstices of tissue thus producing a tumor-like enlargement. Bell (4) has written that "the hematoma may be largely reabsorbed or the connective tissue may react and produce a fibrous mass which persists indefinitely. Such old hematomas are composed of fibrous tissue interspersed with macrophages containing hemosiderin."

These old hematomas, which have been converted to fibrous tissue, are really similar to keloids of the skin. This is essentially a reduplication of the author's experiments in which he produced similar fibrous masses in his skin by repeated injections of his blood serum (2). Here again, in the case of hematomas, we can observe the relationship of fibromatous tissue changes which occur when the blood becomes inspissated. According to the author's theory, this blood serum attracts fibroblasts to the injured area, and a piling-up of fibrous connective tissue results. It is the writer's opinion that the same phenomenon may be the cause of uterine "fibroids," since estrogenic substances may produce a markedly increased blood supply to the uterine

interstitial tissue (mainly in relation to the muscular element). The presence of inspissated blood in the stroma of this tissue may attract the fibroblasts, and the presence of fibrous extraneous tissue becomes merely a matter of time (5).

This fibrous reaction to injury seems to be more prevalent than we think. Its association with the presence of hemorrhage may be considered as a danger in the course of surgery, since a bloody operative field may constitute a real source of danger to the patient later on. This inspissated blood, which may be left *in situ* without removal at the time of surgery, may be the main factor in the production of *adhesions*. The same chain of events could certainly take place if hemostasis is neglected also.

THERE is a pathological condition of the eye (6) in which membranes of whitish connective tissue project into the vitreous, usually near the disc. This fibrous tissue proliferation of the eye is termed *retinitis proliferans*. Here again, blood vessels accompany these whitish strands of tissue into the vitreous humor. May (7) states that these membranes are the result of hemorrhages into the vitreous humor. These clots become organized instead of being absorbed. The condition, according to May, occurs in young persons "as a sequel to the recurrent hemorrhages into the retina and vitreous which are considered tuberculous." May mentions other causes for the condition, such as traumatism, especially perforating wounds. It is also present in certain diseases, such as syphilis, nephritis, and diabetes.

From the above description of retinitis proliferans, it seems that we are dealing with a hematoma of the vitreous of the eye. Here again, fibrous connective tissue results when the hematoma does not become absorbed, so that the end result is a greater or lesser mass of connective tissue in the eye. Basically, it does not seem to differ from the description of the chain of events which occurs as the result of hemorrhage in other parts of the body. We do see the presence of hemosiderin in some hematomas which have produced fibromatous changes, yet the presence of this blood pigment is to be expected, and its presence may also be discovered in the microscopic examination of sections of tissue from cases of retinitis proliferans.

This same microscopic picture is also to be found in the edge of an *abscess or infarct*, where "the formation of granulation (connective) tissue is identical with that in a wound of the skin," according to Moore (8).

The condition known clinically as *fibrosis uteri* seems to be associated closely with a generalized fibrous change in the amount of this tissue in the uterus. Bell (9) has written that "a study of normal uteri from women of various ages was made by Baker. No case was included in the normal group in which there had been any pelvic disease or any symptom referable to the pelvic organs. It was found that there is a progressive increase of fibrous tissue and a corresponding decrease of smooth muscle with age. The uteri of all elderly women show a marked increase of collagenous tissue at the expense of smooth muscle. In women of corresponding age there was the same amount of fibrosis in those that did not bleed as in those in which bleeding occurred. It has been established that bleeding was not due to fibrosis uteri. Fibrosis of the myometrium is accentuated by chronic sytemic disease and by multiple pregnancies."

It seems obvious, in the light of the previous discussion, that systemic disease, such as arteriosclerosis, diabetes, and tuberculosis, would have the tendency to produce some hemorrhage through diapedesis from the blood vessels. Obviously, multiple pregnancies produce enough traumatic effects upon the myometrium to cause the presence of pooled blood. Hence, these changes, seen in fibrosis uteri, are to be expected, since the presence of inspissated blood tends to produce fibrosis. This seems to be an important pathological phenomenon which has not had enough attention focused on it in the past by pathologists, and also by the general surgeons and the gynecologists.

TO return to the subject of the leiomyomata, these are the most common nonmalignant tumors of the body according to

Foot (10), who, along with Moore (11), claims that this tumor should not be called a fibroid nor a fibroleiomyoma. Foot feels that this is justified, since even if the tumor does consist of fibrous tissue, its reaction is much like any desmoplastic response to the presence of tumor.

The author begs to disagree with these authorities, and by so doing, he presumes that the wrath of the gods will plague him for some time to come. Nevertheless, if one admits that the fibrous tissue element is dominant, there seems to be cause to uphold the view of the author. Boyd (12) has stated that "every fibromyoma commences in the substance of the muscle," and "as it grows expansively it compresses the muscle." In addition, he has noted that "the small tumors consist mostly of muscle, but as they grow in size the proportion of fibrous tissue becomes greater, and tumors of long standing may be almost fibrous."

IT seems that some pathologists feel that there is a proliferation of the muscular element, although this has not, to the author's knowledge, ever been proved satisfactorily. Foot has noted that microscopic examination of these so-called fibroids shows a "predominance of smooth muscle fibers running in interlacing bundles and sometimes showing palisaded lines of muclei like rows of soldiers at right angles to the axis of the muscular fibers. There is always an admixture of fibrous connective tissue which may in time overshadow and replace the muscular elements."

This is a beautiful description of the common histological findings in these tumors, but most unfortunately, it does not tell us why these muscle nuclei have become palisaded. Is it not due to the invasion of the fibrous tissue which acts as an irritant or foreign body? Excessive pressure from an increased influx of connective tissue may cause atrophy of the muscular elements with their replacement by fibrous tissue, in our opinion.

It seems odd that the muscular element proliferates and then, for some reason or other, it becomes replaced by connective tissue. Does not the view as to infiltration of the latter simplify the entire pathological picture? I mentioned this view to a well known Philadelphia pathologist, and his vehement response to my views must have caused the great Cohnheim to stir in his grave. Yet, he gave no suitable answer to refute my viewpoint.

It seems that some scientists try to confuse the pathological picture. If inspissated blood can attract fibroblasts, which lay down connective tissue in the skin, it is not too difficult to imagine what happens when a menstruating uterus exhibits an infected endometrium. The uterine contractions are certainly capable of forcing some of this blood into the tissue stroma of the uterus. We have reviewed the phenomena which occur when a hematoma becomes transformed into a fibrous mass. The same holds true in the condition which the ophthalmologists have described under *retinitis proliferans*. We have previously described this underlying chain of events in our explanation of the pathogenesis of keloids and hyperplastic scars. The same may hold for the formation of adhesions.

NONE of these phenomena seem to occur out the exciting factor, the presence of inspissated blood. In my humble opinion, a similar phenomenon may occur in any part of the bodily organs or tissues. If welled up blood remains, as the result of one or more types of trauma (infection, hemorrhage, etc.), there is a distinct possibility as to the ultimate formation of fibrous tissue. Naturally this applies to uterine "fibroids." I like the term because it describes what I feel happens in the formation of such tumors.

If one produces uterine fibroids with the use of estrins, according to Lipschutz' (13) method, the blood supply of that organ is increased markedly and hemorrhage may take place readily. If hemorrhage does occur, we can expect the formation of fibroids. One has never noted such a tumor develop in a woman who has passed the menopause. Colored women are more prone to develop such tumors than are white females. Furthermore, keloids are far more common in the colored race. Perhaps the answer to this last statement may lie in a greater tendency of the colored race to hemorrhage. This would make an excellent study for some enterprising investigator.

I REALIZE that I may be guilty of committing a serious apostasy against the theory of embryonic rests or similar theories in relation to the matter of fibrous tumor formation. From my previous studies, I feel that the embryonic rest theory is not applicable when the matter of fibroid or fibrous growths is being considered.

We are planning to supplement our current views of the theory of positive chemotropism with animal experimentation.

The author is reminded of Milton's words, in this discussion of fibrous tumor formations. He wrote: "Accuse not Nature; She hath done her part. Do Thou but Thine."

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(9) See Op. cit. #4, page 712.
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416 VAN ANTWERP BUILDING

ESSENTIAL HYPERTENSION

—Concluded from page 254

The above devices add nothing to our present knowledge of the cause of hypertension, but they do aid the physician in management of the patient with the disorder and to that extent are worth trial in any suitable subject.

SCARBROUGH BUILDING

Note on the Proprietary Industry

MANUFACTURERS of proprietary madicines now spend at least $8,000,000 annually in research in their own laboratories and through cooperative agencies including universities.

New York-Postgraduate Center

NEW York City will become one of the largest postgraduate medical centers of the future. Many graduates from medical schools throughout the United States, South America, Europe, and China will enroll here in medical schools and their affiliated hospitals.

The Bellevue Nursing Schools

THE first training school for nurses in America was founded in 1873 by Bellevue Hospital. Later it established the first school of male nurses. In 1942 these schools became affiliated with New York University College of Medicine.

Obtaining Nitrogen Balance

FOLLOWING the intravenous injections of sterile solutions of amino acids into man with and without dextrose, numerous investigators have noted that nitrogen balance can be obtained, while others have observed protein regeneration, better healing of wounds, quicker recovery from major surgical operations, healing of burns and of ulcers, and, in general, a feeling of well being.

Two Famous Medical "Firsts"

THE first clinic in the United States for the care of ambulatory cardiac patients and the first department of forensic medicine in this country were established in New York City by Bellevue Hospital and the New York University College of Medicine.

PENICILLIN IN EYE WORK

James T. Jarrott, M.D., F.A.C.S.

Hempstead, N. Y.

ALL of you, as practicing physicians, regardless of your specialty, see cases of eye diseases and are confronted with the question, whether or not the condition should be treated with penicillin.

Penicillin is the drug of choice in the treatment of eye diseases secondary to the gonococcus, streptococcus and staphylococcus and in intra-ocular infection by the pneumococcus. The pneumococcus is more frequently the cause of infection than the staphylococcus in penetrating injuries of the eye.

There are several methods of administering penicillin therapy, depending on the site and source of the infection:

1: Infection of the lids. The commonest infection here is ulcerative blepharitis and this condition is best treated with an ointment.

2: Infection of the conjunctiva, especially ophthalmia neonatorum and gonococcal conjunctivitis: best treated by the instillation of drops of a strength of 2500 O.U. per cc. used every half hour for three hours, then hourly for twenty-four hours and every two hours thereafter.

3: Corneal ulcers and the anterior segment of the eye:

(a) By subconjunctival injection of one-half cc. of a strength of 5000 O.U. per cc.

(b) Iontophoresis—with a solution of a strength of 3000 O.U. per cc. dissolved in a 0.9 per cent NaCl solution for 5 minutes.

(c) Cotton pack in the lower fornix, using one-tenth of a cc. of a strength of 5000 O.U. per cc. and leave in for one to two hours.

(d) Application of penicillin crystals directly to the corneal ulcer.

(e) Direct injection into the anterior chamber—2/10 cc. of a strength of 2500 O.U. per cc. The best result is obtained if injection is made within 6 hours following infection: after twelve hours the results are not so satisfactory.

(f) Intramuscular or intravenous injection is not so satisfactory for intra-ocular infection as the concentration within the eye is not sufficient to combat infection.

(g) Posterior segment—Intravitreal injection.

(h) Orbital cellulitis—Intramuscular or intravenous injection.

4: For the posterior segment of the eye, intravitreal injection of 0.2 cc. of penicillin of a strength of 2500 O.U. per cc. This injection should be made at least within 12 hours after infection; after 24 hours the results are not satisfactory.

5: For orbital cellulitis—intramuscular or intravenous injection is the most satisfactory.

In using penicillin locally to the eye, there is a possibility of producing an ocular dermatitis, which is evidenced by the lids becoming red and edematous with weeping of the skin, congestion of the conjunctiva, and seromucoid secretion.

Professional Building

Presented before Clinical Session of Associated Physicians of Long Island at Meadowbrook Hospital, June 11th, 1946.

✚

Treatment of Peptic Ulcer at Permanente Hospital

HENRY J. Kaiser's Permanente Foundation Hospital in Oakland, California, is using a stomach hormone treatment for peptic ulcer.

This method of treatment, according to Clyde F. Diddle, hospital administrator, has been developed by a group of midwestern scientists after many years of research.

The treatment with stomach hormone, a captured internal secretion, has been found to retard the motion of the stomach and reduce stomach secretions.

CONTEMPORARY PROGRESS

PEDIATRICS

Virus Stomatitis and Virus Diarrhea of Infants and Young Children

G. J. BUDDINGH (*Southern Medical Journal*, 39:382, May 1946) presents a study of a form of virus stomatitis and virus diarrhea occurring chiefly in infants under six months of age. The usual type of aphthous stomatitis, which occurs most frequently at six months to five years of age, is caused by the virus of herpes simplex. If the form of virus infection described by the author occurs in infants and children over six months of age, the stamatitis is the chief manifestation. There is usually a sudden onset with refusal of food and irritability. The earliest lesion is a fine vesicular eruption along the anterior border of the tip and the under surface of the tongue and occasionally on the gums. The vesicles soon disappear; the affected area shows an excoriated surface that tends to bleed easily; the gums are swollen and hyperemic. There is little if any fever. This form of stomatitis is self-limiting, and persists for seven to fourteen days. In infants two weeks to six months of age, a moderate diarrhea is the chief symptom of the infection, but most of these infants have some stomatitis that may be overlooked. There are usually four to eight stools daily, of greenish-yellow color with occasional "flecks" of bright red blood. In most cases, the child shows little evidence of illness and takes feedings regularly. The diarrhea usually continues four to ten days, and treatment with sulfonamides has no effect on the course of the disease. When this infection occurs in children under two weeks of age in the nursery, diarrhea is the chief symptom and epidemics of "diarrhea of the newborn" may develop. At the Vanderbilt Hospital, Nashville, Tenn., 5 such epidemics have occurred, and the disease has been mild except in premature infants. Of 33 full-term infants developing the disease, only one died; of 8 premature infants, 3 have died. Some other epidemics of diarrhea of the newborn occurring elsewhere but found to be due to this virus have been of more severe type. The stools in this type of diarrhea in the newborn, as in older infants, are greenish-yellow in color and flecked with bright red blood. Careful examination of the mouth and tongue shows a mild stomatitis or glossitis in about three-fourths of the cases. In the milder cases the disease lasts ten days or less; in severe cases it may persist several weeks with exacerbations and remissions. Inoculation of swabbings from the mouth lesions into the rabbit cornea does not produce the typical herpetic keratitis, but does produce a typical corneal reaction, characterized by a definite haziness, with cloudy opacity along the lines of scarification; the same reaction is produced by inoculation of small amounts of stool from cases of diarrhea, due to the virus. As it was found that adults may also be infected with the virus and may act as carriers, the author advises that for immediate control of a nursery epidemic, a serch for the virus should be made in all personnel connected with the nursery by the inoculation of mouth swabs into rabbit corneas. As it has been found also that the virus may be present in the female genital tract this may be the original source of infection in epidemics of diarrhea among the newborn.

COMMENT

These observations are valuable and interesting in view of the immense amount of study and research which has been given to the outbreaks of diarrhea which have occurred in lying-in hospitals. The cause has yet to be definitely found although many agree that a virus and not a bacterium is the etiological factor. **Shigella alkalensis** ***has been considered by some to have a bearing on some epidemics in maternity hospitals. A fact worthy of note is that invariably such epidemics occur more widely in the bottle fed infant than in the breast fed baby. Mothers should be en-***

couraged to nurse their infants at least during their stay in lying-in hospitals.

H.E.U.

Angles of Clearance; A Method for Measuring the Cardiac Size of Children with Rheumatic Heart Disease

C. BERKELEY McINTOSH and ROBERT L. JACKSON (*American Journal of Diseases of Children,* 71:357, April 1946) studied the value of the angles of clearance as a means of measuring size of the heart in children with rheumatic heart disease. In the fluorscopic demonstration of the cardiac silhouette in children, it is shown that the left dorsal border of the cardiac silhouette cleared the spinal column at two points: first, where the cardiac border was separated from the projection of the transverse processes of the vertebrae, and the second, where the cardiac border was separated from the anterior border of the bodies of the vertebrae. These two points are designated as the first and second angles of clearance. In normal children the mean value for the first angle was 51.8 degrees and for the second 63.2 degrees. The authors determined the angles of clearance and the cardiathoracic index in 77 children with rheumatic heart disease. The changes in the angles of clearance and in the index were followed from the active to the inactive stages of rheumatic fever in some cases. In children in whom cardiac enlargement could not be demonstrated by physical examination, the cardiothoracic index was not abnormally high, but the second angle of clearance was abnomally high in 40 per cent, and the first angle of clearance abnormally high in 12 per cent. This indicates that the angles of clearance are of value in showing lesser degrees of cardiac enlargement than are indicated by the cardiothoracic index, and are a valuable adjunct in detecting enlargement of the heart in rheumatic fever radiologically. The trends of the angles of clearance and the cardiothoracic index were not significantly different in the change from the active to the inactive stage of rheumatic fever, and the two methods appear to be of equal value in demonstrating changes in the size of the heart in any individual patient.

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COMMENT

Radiologic study of the heart in rheumatic fever is an important means of evaluating the condition of the heart in this disease. With the electrocardiograph and the aid of the roentgenologist the progress of the disease and the final effect upon the heart may be decided. However, it must be remembered that the clinical course of this disease furnishes the best evidence to the practitioner of its progress.

H.E.U.

Megaloblastic Anemia in Infancy

W. W. ZUELZER and F. N. OGDEN (*American Journal of Diseases of Children,* 71:211, March 1946) report a study of 25 cases of macrocytic anemia in infants, of a type that is of common occurrence, but the nature of which has remained obscure.

The anemia in these cases was normochromic and macrocytic, with leukopenia, neutropenia and thrombopenia; while these characteristics of the circulating blood are not constant, the distinguishing feature of the syndrome is megaloblastic transformation of the bone marrow. This can be determined by means of smears for a definite diagnosis of the condition. In order to demonstrate the effectiveness of any treatment of anemia, the treatment employed must produce both an orderly reticulocyte response within a definite period, and a consistent rise in the hemoglobin and red cell count. In the patients studied infections and other complications were common and multiple transfusions were often necessary, which raised the red cell count above levels where a reticulocyte response could be expected; 3 patients died from intercurrent disease before therapy could be undertaken or completed; crude or purified liver extract given parenterally and folic acid given either orally or parenterally were found to be equally effective in inducing a reticulocyte response, in increasing the red cell count and hemoglobin and also in increasing the neutrophil leukocytes and the platelets. The megaloblastic bone marrow pattern was transformed into a normal pattern, in some cases soon after the therapy was begun. These findings indicate that megaloblastic anemia in infants is a deficiency state in regard to a specific factor, or factors, contained in folic acid and also in liver extract. In considering possible etiologic factors in this deficiency state, the authors find infections nad nutritional deficiencies to be most significant, while race, possibly prematurity and maternal anemia are predisposing factors.

COMMENT

Folic acid is now considered a specific in the treatment of macrocytic anemias of childhood particularly, although the same fact applies to adults. Inasmuch as the cost of synthetic folic acid has been up to the present time high, liver extracts and preparations of the vitamin B complex made from liver contain folic acid and may be used in cases of macrocytic anemia. Synthetic folic acid plus the use of liver provides the best form of treatment for a rapid cure of this condition.

H.E.U.

Penicillin in the Treatment of Childhood Gonorrhea

H. F. LEE and WALTER SUSSMAN (*Journal of Pediatrics*, 28:590, May 1946) report the treatment of 21 cases of gonorrhea in children with penicillin. Thirteen of these were cases of vaginitis in girls, 10 of which were acute and had not been previously treated and 3 had been treated with sulfonamides without obtaining a bacteriological cure. There were 8 cases of acute anterior urethritis in boys under 10 years of age, none of which had been treated previously. The dosage varied from 100,000 to 300,000 units, depending upon the method of administration. In some cases injections were given at two-hour intervals; the total dosage in all these cases was 100,000 units; in 4 cases oral tablets with sodium citrate buffer were used, the tablets being given every two or four hours; the total dose in all these cases was over 100,000 units, in 2 cases 300,000 units. In 3 cases a single intramuscular injection of 150,000 units of penicillin in beeswax-peanut oil suspension was given. In every patient smears and cultures became negative after treatment. Dysuria, if present, was relieved within twenty-four to forty-eight hours. The discharge diminished progressively, and usually ceased by the fourth or fifth day in girls and even earlier in boys. In girls, 3 negative smears and three negative cultures were required as a criterion of cure; in boys 3 negative smears were accepted as evidence of cure, although all these patients also had one or more negative cultures. The criteria of cure were fulfilled in all cases. In the only chronic case in the series, a case of vaginitis of four months' duration, given a single injection of penicillin in oil, there was a recurrence of discharge after temporary improvement. Cure was prompt when a second injection of 300,000 units in oil was given.

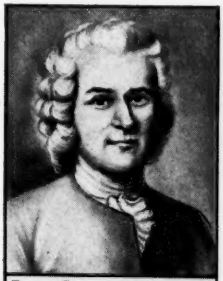
COMMENT

Penicillin and the sulfonamides have added much to the treatment of gonorrheal vaginitis in girls. A valuable adjunct to the intramuscular injection of penicillin for this condition is the nightly administration in the vagina of 10,000 units of penicillin. Children seldom object to such an instillation through a number 10 or 12 F rubber catheter.

H.E.U.

Medical BOOK NEWS

Edited by
ALFRED E. SHIPLEY, M.D., Dr. P.H.
All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn 16, N. Y.



Jean Jacques Rousseau
1712 ~ 1778

Classical Quotations

● **Perceiving my sufferings to be incessant, M. de Luxembourg sent for Friar Come. The operation was cruel and tedious. Upon the first examination, Come thought he found a great stone; at the second, he could not find it again. After a third attempt with so much care and circumspection that I thought the time long, he declared there was no stone, but that the prostate gland was scirrhous and thickened. He added that I had a great deal to suffer, and should live a long time.**

JEAN JACQUES ROUSSEAU

***The Confessions of Rousseau.* Composed between 1766 and 1770; published in 1781 and 1788, after the author's death.**

Musicology

Music for Your Health. By Edward Podolsky, M.D. New York, Bernard Ackerman, [c. 1945]. 8vo. 134 pages. Cloth, $2.00.

PHYSICIANS, when adequately alerted, tend to capitalize every worthwhile therapeutic modality. Notwithstanding the fact that music is one of the oldest therapeutic forces, only recently has scientific investigation been applied to music's far-flung domain in furthering human efficiency and in restoring physical and mental well-being.

The author, well-steeped in musicology, brings forth the fruits of his researches in a multiplicity of applied fields; music in healing the body and mind, getting more power and pleasure from music, making you work and feel better, music for insomnia and warped personalities. Of outstanding significance is the chapter devoted to "Music and War." Examples of music "prescriptions" for individual and group use are presented and discussed.

This book should go far in furthering the discriminate utilization of music during convalescence, as a morale builder, to increase efficiency and pleasure in industrial plants, as an operational anesthetic, and perhaps as a calmative in your waiting room or office.

FREDERICK L. PATRY

Therapeutic Diets

Dietotherapy. Clinical Application of Modern Nutrition. Edited by Michael G. Wohl, M.D. Philadelphia, W. B. Saunders Co., [c. 1945]. 8vo. 1029 pages, illustrated. Cloth, $10.00.

AS Wilder has emphasized in the foreword of this volume, therapeutic diets all too frequently have been planned shortsightedly with resulting neglect of the long-time interests of the patient. Such error should not arise with a book like Wohl's at hand, for it is an organized group of essays by some fifty-eight authorities on various branches of the field of nutrition. It is arranged in such manner as to cover: 1. Normal nutrition (in all its phases). 2. Nutrition in periods of physiologic stress, such as pregnancy, growth periods, geriatric nutrition, periods of infection and immunity demands, and extremes of exertion. 3. Nutrition in disease, which covers all phases of disease from the treatment of diabetes by Root and C. C. Bailey, Addison's Disease by Rowntree, to nutrition in the psychiatric patient by Earl D. Bond.

Although the science of nutrition is far from complete, this work will furnish the student and practitioner with all of the substantiated discoveries of practical significance to date. It effectively fits dietetics into the scheme of treating disease on an understanding basis.

GEORGE E. ANDERSON

Canadian Public Health and Welfare

Public Health and Welfare Reorganization. The Postwar Problem in the Canadian Provinces. By Harry M. Cassidy, Ph.D. Toronto, The Ryerson Press, [c. 1945]. (Bruce Humphries, Boston.) 12mo. 464 pages, illustrated. Paper, $5.00; Cloth, $6.00.

THE author writes about Canadian social security problems of which public health matters are a part.

After an historic review of the work done during the past decade or more, an appeal is made for a more centralized, general policy with better coordination of national, provincial and municipal programs.

So far as the public health phases are concerned, the subject matter deals largely with organization and administration. The book is of greater interest to public health and medical administrators than to physicians active in clinical medicine.

ALFRED E. SHIPLEY

Eye Book for Medical Officers

A Manual of Ophthalmology for Medical Officers. By Lt. Col. B. W. Rycroft, R.A.M.C. New York, Paul B. Hoeber, [1945]. 8vo. 95 pages, illustrated. Cloth, $2.50.

THIS is a compend of various eye subjects with which the medical officers commonly deal. Although it is not generally useful to ophthalmologists, it has many novel viewpoints and presents a unique arrangement which may be of assistance to a teacher. It is apparently well adapted for the use of the British Medical Officer and contains numerous illustrations and succinct outlines of various subjects. Some of the instruments described and illustrated are quite different from those used in this country.

This book is handicapped by the absence of a bibliography to which the interested reader would turn for elucidation.

JOHN N. EVANS

BOOKS RECEIVED *for review are promptly acknowledged in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notices will be promptly published shortly after acknowledgment of receipt has been made in this column.*

Physiotherapy. By Thomas Francis Hennessey, M.D. Boston, Bellman Publishing Co., [c. 1946]. 8vo. 23 pages. Paper, 75c. (Vocational & Professional Monographs.)

The Science & Art of Medicine. An Inaugural Lecture. By Sir Lionel Whitby, M.D. Cambridge, The University Press (New York, Macmillan Co.), [c. 1946]. 12mo. 24 pages. Paper, 50c.

The Psychology of Seeing. By Herman F. Brandt, Ph.D. New York, Philosophical Library, [c. 1945]. 8vo. 240 pages. Cloth, $3.75.

The March of Medicine. The New York Academy of Medicine Lectures to the Laity, 1945. New York, Columbia University Press, [c. 1946]. 8vo. 154 pages. Cloth,, $2.00.

Cornell Conferences on Therapy. Volume One. Edited by Harry Gold, M.D., *et al.* New York, Macmillan Co., [c. 1946]. 8vo. 322 pages Cloth, $3.25.

A Malariologist in Many Lands. By Marshall A. Barber. Lawrence, Kansas, University of Kansas Press, [c. 1946]. 8vo. 158 pages, illustrated. Cloth, $2.50.

Preoperative and Postoperative Treatment. Edited by Lt. Col. Robert L. Mason, M.C., A.U.S., and Harold A. Zintel, M.D. 2nd Edition. Philadelphia, W. B. Saunders Co., [c. 1946]. 8vo. 584 pages, illustrated. Cloth, $7.00.

The Venous Pulse and Its Graphic Recording. By Franz M. Groedel, M.D. New York, Brooklyn Medical Press, [c. 1946]. 4to. 223 pages, illustrated. Cloth, $5.50.

With Cradl and Clock. By Knud Stowman. New York, Harper & Bros., [c. 1946]. 8vo. 292 pages. Cloth, $2.50.

Synopsis of Physiology. By Rolland J. Main, Ph.D. St. Louis, C. V. Mosby Co., [c. 1946]. 12mo. 341 pages, illustrated. Cloth, $3.50.

A Psychiatric Primer for the Veteran's Family and Friends. By Alexander G. Dumas, M.D., and Grace Keen. Minneapolis, University of Minnesota Press, [c. 1945]. 8vo. 214 pages, illustrated. Cloth, $2.00.

Chemistry of Food and Nutrition. By Henry C. Sherman, Ph.D. 7th Edition. New York, Macmillan Co., [c. 1946]. 8vo. 675 pages, illustrated. Cloth, $3.75.

Poisons. Their Properties, Chemical Identification, Symptoms, and Emergency Treatments. By Vincent J. Brookes and Hubert N. Alyea. New York, D. Van Nostrand Co., [c. 1946]. 8vo. 209 pages, illustrated. Cloth, $3.00.

Shock Treatments and Other Somatic Procedures in Psychiatry. By Lothar B. Kalinowsky, M.D., and Paul H. Hoch, M.D. New York, Grune & Stratton, [c. 1946]. 8vo. 294 pages. Cloth, $4.50.

Out of Carnage. By Alexander R. Griffin. New York, Howell, Soskin, [c. 1945]. 8vo. 327 pages. Cloth, $3.00.

Ward Twenty. By James Warner Bellah. Garden City, Doubleday & Co., [c. 1946]. 12mo. 160 pages, illustrated. Cloth, $2.00.